AMENDMENT TO THE CLAIMS

1. (Currently Amended) ~~An inrush current~~A controller for a device, the controller comprising:

a connector for plugging the device into a source of energization and unplugging the device from the source of energization, wherein the connector ~~including~~comprises:

a first contact for connecting to a first power supply contact of the source~~,~~;

a second contact for connecting to a logic output from the source~~,~~; and

a third contact for connecting to a second power supply contact of the source;

an impedance having a current input that couples to the first contact of the connector, an impedance control input, and a current output coupling to the device; and

an impedance control circuit ~~having~~comprising:

a first timer;

a logic input coupling to the second contact of the connector~~,~~; and ~~having~~

an impedance control output connected to the impedance control input, the impedance control output forcing the impedance OFF during a first time interval controlled by ~~a~~the first timer which is triggered by the device being plugged into the source of energization, and the logic output from the source enabling a limited inrush at the current input during a second time interval controlled by a second timer.

2. (Currently Amended) The ~~inrush current~~ controller of Claim 1 wherein the device comprises a data storage device and the source of energization comprises a host computer system.

3. (Currently Amended) The ~~inrush current~~ controller of Claim 1 wherein the impedance is ~~continuously~~ variable as a function of the control input.

4. (Currently Amended) The ~~inrush current~~ controller of Claim 1 further comprising~~wherein~~:

the first timer ~~couples~~coupled to the current input and the impedance control output, ~~and provides~~the first timer comprising a first timer output that forces the impedance OFF during the first time interval; and

~~an inrush~~a current limit circuit coupled to the logic input and the impedance control output, ~~and providing an inrush~~the current limit circuit comprising a current limit output coupled to the impedance control output and controlled by the second timer.

5. (Currently Amended) The ~~inrush current~~ controller of Claim 4 wherein the first timer output overrides the ~~inrush~~ current limit output to the impedance control output during the first time interval such that the impedance control output forces the impedance OFF independent of the current limit output of the current limit circuit.

6. (Currently Amended) The ~~inrush current~~ controller of Claim 5 wherein the first timer output is an open circuit ~~after the first time interval~~during the second time interval such that the first timer output does not override the current limit output of the current limit circuit.

7. (Currently Amended) The ~~inrush current~~ controller of Claim 4 wherein the ~~inrush~~ current limit output gradually changes the impedance control output during ~~a turn on~~ the second time interval so that a voltage output of the impedance ~~a device voltage~~ has a slew rate that does not exceed ~~than~~ 12 volts per 100 milliseconds.

8. (Currently Amended) The ~~inrush current~~ controller of Claim 7 wherein the device has an impedance that is partially inductive.

9. (Currently Amended) The ~~inrush current~~ controller of Claim 4 wherein the first timer resets automatically when the connector is disconnected from the source of energization.

10. (Currently Amended) The ~~inrush current~~ controller of Claim 4 wherein the first timer is triggerable by voltage transients at the current input.

11. (Currently Amended) The ~~inrush current~~ controller of Claim 1 wherein the impedance control output~~logic input~~ triggers the limited inrush when the logic input is open circuit, and wherein the impedance control output triggers the limited inrush when the logic input is at a high level.

12. (Currently Amended) The ~~inrush current~~ controller of Claim 1 wherein the impedance comprises a transistor.

13-25. (Cancelled)

26. (New) A controller for a device, the controller comprising:

a connector configured to connect the device to a power source, wherein the connector comprises:

a first contact for connecting to the power source; and

a second contact for connecting to a logic output associated with the power source;

an impedance component having a current input coupled to the first contact of the connector, an impedance control input, and a current output coupled to the device; and

an impedance control circuit comprising:

an impedance control output coupled to the impedance control input;

a first timer coupled to the current input and the impedance control output, wherein the impedance control circuit is configured to enable the impedance control output to force the impedance component to an OFF state during a first time interval controlled by the first timer, wherein the

first timer is enabled when a connection is made between the connector and the power source; and

a logic input coupled to the second contact of the connector, wherein the impedance control circuit enables a limited amount of current at the current input based on the logic output during a second time interval.

27. (New) The controller of claim 26, wherein the impedance control circuit further comprises:

a current limit circuit coupled to the logic input and the impedance control output, wherein the current limit circuit is configured to enable the impedance control output to control the impedance component to provide the limited amount of current at the current input during the second time interval such that a voltage of the device has a slew rate that does not exceed a preselected limit, wherein the second time interval is controlled by a second timer.

28. (New) The controller of claim 26, wherein the first timer is enabled by the device being physically connected to the power source, which forces the impedance component OFF during the first time interval.

29. (New) The controller of claim 26, wherein impedance component includes a variable impedance, and wherein the impedance control output is coupled to the impedance control input for controlling the variable impedance.

30. (New) The controller of claim 30, wherein the impedance control circuit comprises:

a current limit circuit coupled to the logic input, the current limit circuit including a current limit output coupled to the impedance control output such that the impedance control output is configured to control the variable impedance based

on the logic input, wherein the first timer includes a first timer output configured to override the current limit output such that the impedance control output forces the impedance OFF during the first time interval independent of the current limit output.

31. (New) The controller of claim 26, wherein the device comprises a data storage device and the source of energization comprises a host computer system.

32. (New) The controller of claim 26, wherein the first timer is configured to be enabled by voltage transients at the current input, and wherein the first timer is configured to automatically reset when the connector is disconnected from the power source.

33. (New) A controller for a device, the controller comprising:

a connector for plugging the device into a source of energization and unplugging the device from the source of energization, wherein the connector comprises:

a first contact for connecting to a first power supply contact of the source;

a second contact for connecting to a logic output from the source; and

a third contact for connecting to a second power supply contact of the source;

an impedance component having a current input coupled to the first contact of the connector, an impedance control input, and a current output coupled to the device; and

an impedance control circuit comprising:

an impedance control output connected to the impedance control input;

a first timer configured to force the impedance OFF during a first time interval controlled by the first timer;

a second timer configured to provide a current limiting output during a second time interval; and

a current limiting circuit coupled to the logic input and the impedance control output,

wherein the current limiting circuit is configured to enable, via the impedance control output, a limited current output from the impedance component to the device during the second time interval based on the second timer,

wherein the current limiting circuit is configured to gradually change the impedance control output such that a voltage of the device has a slew rate that does not exceed a predetermined limit during the second time interval, and

wherein the current limiting circuit is configured to gradually change the impedance control output based on the logic output from the source.

34. (New) The controller of claim 33, wherein the predetermined limit is 12 volts per 100 milliseconds.

35. (New) The controller of claim 33, wherein the first timer is coupled to the current input and the impedance control output.

36. (New) The controller of claim 33, wherein the first timer is enabled by detecting a new power source connection from the source of energization, and wherein the first timer is configured to force the impedance component OFF during the first time interval in response to detecting the new power source connection.

37. (New) The controller of claim 33, wherein the first timer is configured to be triggered by voltage transients at the current input, and wherein the first timer is configured to automatically reset when the connector is disconnected from the source of energization.

38. (New) The controller of claim 33, wherein the impedance component includes a variable impedance, and wherein the impedance control output is coupled to the impedance control input for controlling the variable impedance.